Resisting Broken Windows:

The causal effect of neighborhood disorder on political

participation – Addendum

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Addendum Items

1. Pre-analysis plan for secondary outcome: vote choice

2. Amendment to original pre-analysis plan re: multiple comparisons adjustment

Introduction

This pre-registration document details the analysis plan for an additional outcome in the previously pre-registered "Resisting Broken Windows: The Causal Effect of Neighborhood Disorder on Political participation". In the original pre-registration, we pre-registered an analysis plan comparing the turnout of voters living at varying distances from the Boston Medical Center area, which saw a major uptick in crime, drug-use and the density of its homeless population following the closing of the Long Island bridge in 2014. In the original pre-analysis plan, we stipulated that the effects on turnout is the primary test of our theory, that heightened neighborhood disorder would provoke political mobilization as voters are unhappy with the neighborhood changes and seek to effect change by voting. Having run this analysis, we find that voters who live proximate to the affect sites do vote in greater rates in the ensuing city elections. In the last section of the original analysis

plan, we acknowledge that we may include analysis of other outcomes as the project progresses, and that, if we did so, we would pre-register in greater detail the analysis and expectations for those outcomes.

In this document, we lay out the analysis plan for testing whether the causal process we propose extends to vote choice. We do so to test if voter mobilization is driven by a desire to punish municipal elected officials for the neighborhood change. There is a robust literature on retrospective voting in American elections, as voters take into changes in their own lives during an incumbent's tenure and assessments of candidate performance as they update their vote choices (Fiorina, 1981; Healy and Malhotra, 2013; Malhotra and Margalit, 2014). More recent literature assesses whether shocks influence incumbent electoral fortunes (Achen and Bartels, 2016; Fowler and Hall, 2018; Ashworth, Bueno de Mesquita and Friedenberg, N.d.). Notably, Ashworth, Bueno de Mesquita and Friedenberg (N.d.) argue that events such as the closing of the Long Island Bridge, even if they are not directly attributable to the actions of the incumbent, offer an opportunity for voters to gain information on the competency of their elected official through the official's response to the shock – potentially leading to an electoral backlash. If voters blame Walsh for the bridge closing, or if they do not approve of the measures his office has taken to deal with the changes in the Boston Medical Center area, then they should respond by voting against Walsh in the subsequent election. Mayor Walsh took office just 10 months before it was discovered that the Long Island bridge had become unsafe, and he has argued that the circumstances that led up to the closing of the bridge were not under his control. The decision to close the bridge was made after an inspection from the state Massachusetts Department of Transportation declared the bridge unsafe (Caesar, 2014).

Our main hypothesis is that voters proximate to the relocation sites will vote against Mayor Walsh in the 2017 mayoral election, either because the voters blame Walsh directly for the increased disorder in their neighborhoods, or because they perceive his response as insufficient. We cannot determine from the vote share data which of these mechanisms most drives the hypothesis, but evidence in support of this hypothesis will be interpreted as voter dis-satisfaction manifesting into both mobilization and anti-incumbent vote choice. Alternatively, evidence against this hypothesis (a null result or contrary result) would indicate that, while voters were compelled to participate in local elections in response to neighborhood changes, they did not blame Walsh for problems related

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to increases homelessness and drugs in their community following the Long Island Shock and/or were not sufficiently dissatisfied with his response to drive vote choice in the aggregate.

The overall framing of the project does not change as a result of whether we find support for or against this outcome's hypothesis. The main purpose of the project remains determining whether voters are mobilized to vote in response to increases in neighborhood disorder. Adding the outcome on vote choice is meant to test another dimensions of mobilization to support our turnout finding.

Neighborhood Change and Fallout

Mayor Walsh repeatedly promised to "clean-up" the Boston Medical Center and Methadone Mile area, though residents remain frustrated with the state of the neighborhoods (Marcelo, 2017). In December 2016, Walsh thanked attendees of a neighborhood association for the patience and toleration of the drug presence and asked for six months to address the problem, promising that he was "laser-focused" on the issue (Daniel, 2016). To address business and neighborhood complaints about loitering, littering, and public drug use, the city of Boston launched a Mobile Sharps Collection Team to pick up discarded syringes in June 2015 (City of Boston, 2015), created a program for outreach workers regularly walked along the streets around the Boston Medical Center to engage drug users in September 2016 (Becker, 2017a), created a special clinic where people under the influence of drugs can be supervised, formed a specialized unit to respond to overdose calls along Massachusetts Avenue in June 2017 (Atkinson, 2017), and built a $1 million, air-conditioned "day-center" in Methadone Mile in August 2017 to draw homeless people out of view (Abel, 2017; Bebinger, 2017). The day center was built with consultation from five local business associations (Zalkind, 2017). The Boston Police Department also began regular foot and bike patrols of the area. On the broader opioid epidemic, Walsh added treatment referral services to the city's 311 hotline, boosted appropriations for addiction treatment, expanded housing services to address chronic homelessness, and formed the only municipal Office of Recovery Services in the United States (Becker, 2016; Marcelo, 2017).

Tito Jackson, who challenged Walsh in 2017, criticized his handling of the Bridge Closure, saying that "We have a mayor who closed the bridge ... with no forethought about what was going to

happen... We actually have gone backwards rather than forward on this issue. You don't have to ask me, you can go to Mass. Ave. and Melnea Cass [Boulevard] and see the legacy of Mayor Walsh," (Becker, 2017b). Walsh, by contrast, denied the connection between Long Island and the visible overdose crisis on Boston's streets, saying that "We had an epidemic the day before we closed that bridge. We had an epidemic the day after... We've replaced every bed. There's nothing I could have done differently" (Freyer, 2017) "Three years later, Walsh's handling of the closure of Long Island hangs over any discussion of his response to the opioid epidemic" (Freyer, 2017). Jack Kelly, an addiction advocate, "faults the mayor for not appointing a high-profile go-to person to address addiction. The Long Island closure, while not the mayor's fault, 'was not the time for a sort of quiet bureaucratic response'..." (Freyer, 2017)

From reviewing local news coverage of the Long Island Bridge, it is not clear whether voters blame Walsh. Commentary of Walsh's handling of Long Island, Methadone Mile, and the opioid crisis been critical as well as positive. Walsh's well-known situation as a person in recovery from alcoholism also colored perceptions of his management of this issue. "John McGahan, president and CEO of The Gavin Foundation, one of the largest providers of long-term addiction treatment programs in Boston, said it's not fair to blame Walsh for an issue he's advocated for throughout his career: 'I've known the mayor for a long time. When I hear people throwing rocks at him on this issue, it disturbs me, because I know how much he cares... So for someone to take cheap shots at a guy who has dedicated as much time and effort — it's despicable."' (Becker, 2017b)Jonathan Scott, heads CEO of Victory Programs, an organization that provides treatment services for those in recovery, praised Mayor Walsh for replacing every bed lost on Long Island, saying "the Mayor absolutely came through. He has my full support and endorsement... the fact that we did this in 2 and a half years was nothing short of a miracle " (Freyer, 2017). A CEO of a trucking company on Mass Ave. in Newmarket Square told a local journalist that while the issues facing the neighborhood have deteriorated, she did not blame Walsh. "The mayor has tried very, very hard, and I think he has done a good job but I think what they need to do is open the island again... [Then] all the services that they need are at least in one spot." (Becker, 2017b)

Hypothesis

The qualitative evidence suggests that the Walsh administration has responded to the heightened neighborhood disorder around the Boston Medical Center area, with varying levels of resident satisfaction. Still, we expect that voters will respond in the aggregate to these neighborhood changes by voting against the incumbent mayor, either because they blame Walsh for the changes in the first place, or are not satisfied with the measures he has taken. The 2013 election was an open election in which Marty Walsh barely won. In 2017, he was a sophomore incumbent who defeated challenger Tito Jakckson (overall, there was a swing towards Walsh in 2017, compared to 2013). We posit that voters closer to the affected sites will have less of a swing to Walsh in 2017 compared to the city as a whole because of their dissatisfaction with Walsh's decision to close the Long Island Bridge and relocate the facilities for homeless people and addiction services to their neighborhood. In other words, we expect that β in the specification below will be positive – the further away from the sites, the greater the shift to Walsh.

Empirical Strategy

We examine the change in voting for Mayor Marty Walsh at the precinct level. Precinct centroid locations will be obtained from the 2017 Boston Precinct Shapefile. Voting results will be matched to the precinct shapefile data using ward and precinct as identifiers. As with the turnout specification detailed in the previous pre-registration, we use log distance because we expect the marginal effect of proximity to decay further from the affected areas.

Facilities

The facilities from which distances are calculated are indicated in the previous pre-registration. They are the Southhampton Street Shelter, the Wood-Mullens Shelter, SOAR, and Safe Harbor.

Specification

We use a difference-in-differences approach. In precinct i, election t, the vote share received by Mayor Marty Walsh is modeled as follows:

$$Walsh_{it} = \alpha_i + \gamma_t + \beta[\log(d_i) \cdot \gamma_t] + \Omega[\Lambda_i \cdot \gamma_t] + \epsilon_{it}$$

where α_i represents a precinct fixed effect, γ_t represents an election fixed effect (i.e., the swing to Walsh from 2013 to 2017 when d is zero), and β captures the extent to which swing in 2017 to Walsh varies by logged distance to the vector of facilities (d_i is the minimum distance of every ith precinct centroid to any of the facilities). Λ_i is some vector of precinct-level controls representing average quantities from the voter file or relevant indicators for particular districts/neighborhoods (more details below) where Ω is a vector of coefficients corresponding to each control. The residual $epsilon_{ij}$ is indexed by i,j to reflect that standard errors will be two-way clustered by precinct and year. This analysis will use the *felm* function of the *lfe* library in R.[1]

Iterative Models and Control Variables

- Model 1 will estimate the coefficient for distance with no other controls.

- Model 2 will add controls for average voter file covariates in each precinct. These controls will be percent black, percent hispanic, percent of voters in the highest income category (the voter file contains an ordinal measure of income for each voter), percent of voters in the lowest income category, and mean age.

- Model 3 will add a dummy for Tito Jackson's Council District (Council District 6) and a dummy for West Roxbury (the neighborhood in which Walsh's 2013 Mayoral opponent resided).

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[1]The same specification formulated as a first difference is as follows:

$$(Walsh_{2017} - Walsh_{2013})_i = \alpha_i + \gamma_t + \beta\log(d_i) + \Omega\Lambda_i + \epsilon_i$$

Multiple Comparisons Adjustment: Correction

This subsection corrects an error in our previous pre-registration of the main analysis, where we look at turnout. As we are testing for participation differences in 3 separate pairs of elections, we will adjust p-values to account for multiple comparisons, with m, the number of hypotheses tested, equal to 3. In the original pre-registration, we said that we will use the Benjamini & Yekutieli false discovery procedure, as implemented by R *stats* p.adjust function with the "BY" method option. It turns out that this method yields an error when m is less than the number of p-values passed to the p.adjust function. Consequently, we will use the more conservative Bonferonni correction, where p-values are multiplied by three to correct for three hypotheses (local elections, state elections, and national elections).

Note that we do not intend to do multiple comparisons adjustment for the precinct-level vote share result because we intend only to perform the analysis on the Mayoral election.

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